

What is claimed is:

[Claim 1] 1. A method of forming an intermeshing gear pump comprised of an outer housing defining a pumping cavity in which a pair of intermeshing gears are journaled on respective shafts for pumping a fluid from a fluid inlet to the pumping cavity to a pumping outlet from the pumping cavity, the intermeshing gears having end faces extending perpendicularly to the rotational axes of the gears at opposite sides of the gears, the outer housing comprising a main body part and at least one separate end plate affixed thereto, the main body part having an opening extending axially therein defining a portion of the pumping cavity facing the circumferential peripheral surfaces of the gears, the end plate closing a respective side of the main body part opening and a fastener arrangement for affixing the end plate and the main body part together, said method comprising the steps of placing a pair of plates in abutting relationship, affixing said plates against transverse movement relative to each other, drilling a pair of holes through the plates from one side of one of the plates and ending through the oppositely facing side of the other of the plates so that any burrs formed by the drilling operation will be formed on the oppositely facing side of the other of the plates, machining a cavity in at least the oppositely facing side of the other of the plates of sufficient size to form the pumping cavity and in an area encompassing that of the previously drilled holes to remove any burrs formed by the drilling operation and form the main body part, and placing and affixing the one plate against the main body part in closing relation to the pumping cavity formed therein to form the end plate therefor.

[Claim 2] 2. A method of forming an intermeshing gear pump as set forth in claim 1 wherein the plates are positioned with the drilled holes formed therein in alignment.

[Claim 3] 3. A method of forming an intermeshing gear pump as set forth in claim 2 further including the step of placing the gears in the pumping cavity of the of the main body part before the end plate is affixed thereto.

[Claim 4] 4. A method of forming an intermeshing gear pump as set forth in claim 3 wherein the drilled holes have a diameter and spacing to accommodate the gear shafts.

[Claim 5] 5. A method of forming an intermeshing gear pump as set forth in claim 4 wherein the gear shafts are positioned with the gears before the end plate is positioned against the main body part.

[Claim 6] 6. A method of forming an intermeshing gear pump as set forth in claim 5 wherein the gears and shafts are separate from each other and further including the step of forming bores in the gears for receiving the respective shafts and non-rotatably affixing at least one of the gears to its shaft.

[Claim 7] 7. A method of forming an intermeshing gear pump as set forth in claim 6 wherein the one gear is non-rotatably affixed to its shaft by forming a slot in one end face of the gear extending perpendicularly to the bore, positioning a coupling pin through the shaft and having at least one end portion received in the slot for non-rotatably coupling the shaft and the one gear and retaining the pin by the positioning of the end plate.

[Claim 8] 8. A method of forming an intermeshing gear pump as set forth in claim 6 wherein both of the gears are non-rotatably affixed to their respective shaft by forming a slot in one end face of each gear extending perpendicularly to its bore, positioning a coupling pin through each of the shafts and having at least one end portion received in said slot for non-

rotatably coupling the shaft and the one gear and retaining the pin by the positioning of the end plate.

[Claim 9] 9. A method of forming an intermeshing gear pump as set forth in claim 1 wherein the machining of the cavity is continued entirely through the main body part.

[Claim 10] 10. A method of forming an intermeshing gear pump as set forth in claim 9 wherein the machining is also continued to form a cavity in one side of the end plate.

[Claim 11] 11. A method of forming an intermeshing gear pump as set forth in claim 10 wherein the other side of the end plate is positioned in closing relation to the main body part cavity.

[Claim 12] 12. A method of forming an intermeshing gear pump as set forth in claim 9 further including the step of placing a third plate in abutting relation to one of the pair of plates before the drilling and machining and the pair of holes are drilled through all of the plates and after the machining the third plate is positioned in abutting relation to the side of the main body part opposite the first piece to form a second end plate for the main body part cavity.

[Claim 13] 13. A method of forming an intermeshing gear pump as set forth in claim 12 wherein the machining is also continued to form a cavity in one side of the first end plate.